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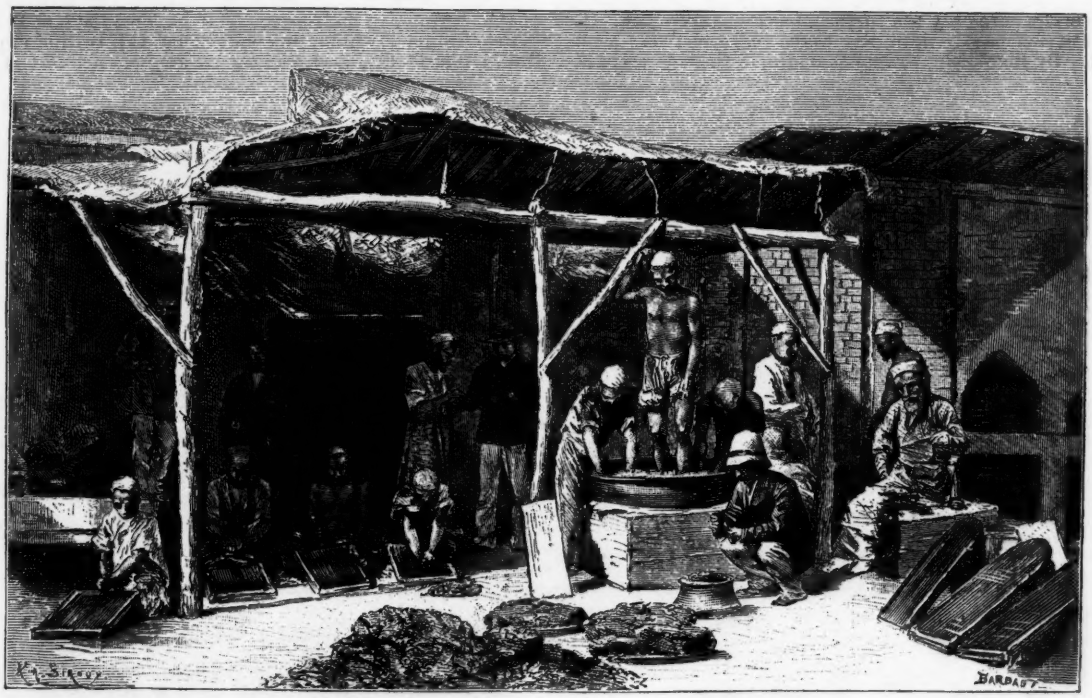


Fabrication of Smoking Opium.

OPIUM-MANUFACTURING IN PERSIA.

PERSIA has of late years considerably increased its production of opium; but its deficient alkaloidal strength, as compared with the opium of Asia Minor, renders it less desirable, excepting as a source from whence morphine may be derived. The same characteristic has led to its use for the manufacture of opium for smoking, for which China, Siam, and the Sunda Islands furnish a market. Pharmaceutical literature furnishes few details of the mode of preparing this particular form of the drug, and the following brief account and its illustrations, by Madame Dieulafoy, will therefore be interesting. Speaking of a visit to the opium works of Mr. Collignon, in the suburbs of Ispahan, she writes:

The juice derived from incision of the capsules is carried to the works in copper pans and treated in two different ways, according as it is to be used for pharmaceutical purposes or for smoking. In the first case, after the evaporation of the contained moisture, the opium is spread upon boards with a smooth spatula of iron. When it is reduced to a paste and deprived of foreign matter, it is formed into balls of equal size and dried upon straw prior to its being packed for shipment—chiefly to England and Holland.

When, on the contrary, the opium is prepared for smoking, the workmen cleanse it of impurities and knead it, as in the preparation of pharmaceutical opium, and then mix with it a certain proportion of oil for the purpose of facilitating its combustion. After having carefully mixed the two by treading with the feet (as in the process of wine-making), it is again worked over with spatulas to expel any excess of liquid and to give a greater degree of fineness to the paste. It is then formed into balls [or rolls], and sent to China and the Indies, or sold, secretly, to Persians.

Poppy cultivation is a large source of revenue in the region of Ispahan, a mule-load being sometimes valued at five to six thousand francs.

Cantharidin.

In a paper recently read by Eugene Dieterich before the Berlin Pharmaceutical Society, he drew attention to the availability of cantharidin in the preparation of blistering plasters and ointments.

Hager (in *Handb. d. pharm. Praxis*) states that 1 part of cantharidin is equal in effect to 30 parts of cantharides. Dieterich (and others) find that Spanish flies yield 0.5 per cent of cantharidin; hence 1 part of the latter would be equivalent to 200 of cantharides. On trying this proportion in practice it was found that the effect was too severe. The best proportion was found to be 1 to 1,000 if the vehicle was oil or a soft plaster mass. Such a combination produces a blister in five or six hours without producing too great a pain. In the case of *hard* plasters, where only the surface has a chance to act, the quantity of cantharidin has to be increased to 1.5 per cent. By increasing the cantharidin, in the soft preparations, to 3 parts in 1,000, the time of action was reduced to three hours, but the pain caused thereby was insufferable. But it was found that addition of *salicylic acid* shortened the period of action materially. By adding 5 per cent of salicylic acid to the official Empl. cantharidis, this will require one to one and a half hours less to produce a blister. But any shortening of time also increases the pain.

Regarding the purification of cantharidin, Dieterich states that this may be done in two ways, either by sublimation or by recrystallization. Sublimation is very easy, does not incommode the operator (if done carefully), and furnishes the substance in handsome white needles, sometimes over 10 Mm. in length. This kind of cantharidin always possesses a very sharp odor, which can only be removed by recrystallization. Moreover, the sublimed produces much more pain than the crystallized. But crystallizing cantharidin is a very disagreeable operation, particularly that portion when the hot solution of cantharidin in acetic ether has to be filtered, during which process some cantharidin is volatilized, to the great discomfort of the operators. The crystals obtained are usually lamellar, and possess an odor of acetic ether even after drying.

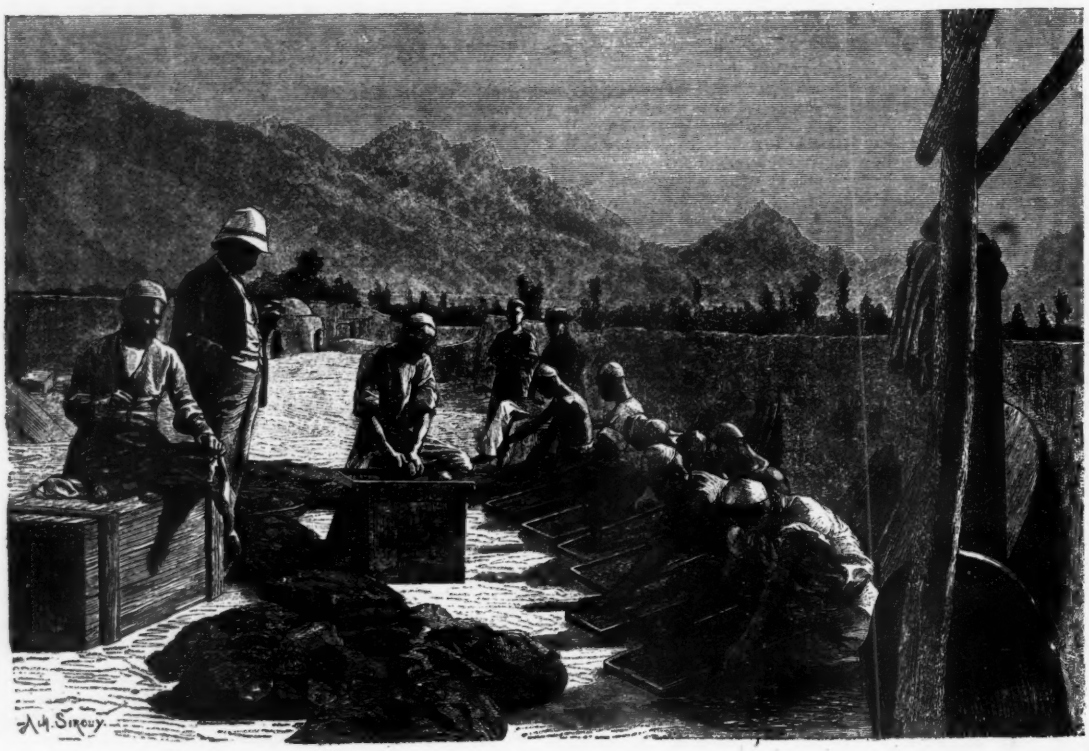
Dieterich has found that when cantharidin is combined with soap its action is delayed, but the accompanying pain is diminished.

Testing Thermometers.

There are various ways to test the correctness of thermometers. The safest plan is to compare them with a standard thermometer—that is, one of which the errors are exactly known under certain conditions of barometric pressure.

This is, however, frequently impossible. In such cases the following method, described by Victor Meyer and P. Jacobson (in their new "Lehrbuch d. organ. Chemie," i., 117), may be used. This consists in observing the reading of the mercury in melting ice (at 0° C., and 760 Mm. barometric pressure), in boiling water (100° C.), boiling naphthalin (218.1° C.), and boiling benzophenon (306.1° C.). The two last-named bodies may easily be procured in a pure state. The experiment must be conducted in a long-necked flask, so that the whole mercurial column involved in the test is immersed in the boiling vapor. Since it is not always possible to work at the normal barometric pressure, the following table will indicate the corresponding temperatures at other pressures:

Barometric Pressure.	Boiling Water.	Boiling Naphthalin.	Boiling Benzophenon.
720 Mm.	98.5	215.7	303.5
725 "	98.7	216.0	303.8
730 "	98.9	216.3	304.2
735 "	99.1	216.6	304.5
740 "	99.3	216.9	304.8
745 "	99.4	217.2	305.2
750 "	99.6	217.5	305.5
755 "	99.8	217.8	305.8
760 "	100.0	218.1	306.1
765 "	100.2	218.4	306.4
770 "	100.4	218.7	306.7



Fabrication of Pharmaceutical Opium. (See page 181.)

Dieterich's Process of Opium Assay.

In the last issue of the *Helfenberger Annalen* (1890), which has just come to hand, Mr. Eugene Dieterich furnishes further contributions toward our knowledge of methods of assaying opium.

The new experiments there detailed were undertaken chiefly for the purpose of testing the statements made by Looff, that potassium carbonate was a better agent for causing the separation of morphine than ammonia water. He also recommended to remove the calcium present by means of oxalic acid, and then to separate the narcotine by adding the potassium carbonate in large excess, followed by filtration within half a minute to prevent separation of morphine, etc.

Regarding these points, Dieterich comes to the following conclusions, which are based upon experiments detailed by him in his paper:

1. Addition of oxalic acid for the separation of calcium, in Looff's method, is superfluous. On adding potassium carbonate to the aqueous extract of opium *not* containing oxalic acid, not a trace of calcium carbonate is precipitated, even when a great excess of potassium carbonate is used.

2. The addition of a large amount of potassium carbonate at one time was shown to be rather a drawback, since morphine was proven to begin to separate if the filtration was not completed within half a minute, and filtration in most cases takes a longer time.

Other features of Looff's method may be passed over here, excepting *one* which was found advantageous by Dieterich and has been adopted by him, thereby shortening the assay very materially. This feature is one which Dieterich himself originally drew attention to, but which he did not incorporate into his process. It is this, that the final mixture of opium extract, acetic ether, and dilute ammonia is to be energetically shaken during ten minutes.

Dieterich's New and Shorter Process of Opium Assay.—Triturate 6 Gm. of opium in fine powder with 6 Gm. of water, dilute, and wash the mixture with water into a tared flask, and add enough water to make the contents weigh 54 Gm.

Allow this to stand for fifteen minutes, frequently shaking, then filter through a folded filter of 10 Cm.

To 42 Gm. of the filtrate add 2 Gm. of a mixture of 17 Gm. ammonia water (0.960) and 83 Gm. water, mix well by rotation (do *not* shake up and down), and filter at once through a ready prepared folded filter of 10 Cm.

Put 36 Gm. of this filtrate into an exactly tared flask, add to it 10 Gm. of acetic ether, mix by rotation, and then add 4 Gm. of the above dilute ammonia. Cork the flask and shake energetically during ten minutes.

In order to separate the emulsion which has been produced by the shaking, add at once 10 Gm. of acetic ether, then pour off the ethereal layer cautiously and as far as possible, again add 10 Gm. of acetic ether, and pour off again. Then transfer the contents of the flask, upon the surface of which there is still a shallow ethereal layer, and without attempting to detach the crystals adhering to the inside of the flask, upon a smooth filter of 8 Cm., and, lastly, wash flask and filter with two successive portions of 5 Gm. of water saturated with acetic ether.

Allow the flask and the filter to drain, then dry both at 100° C., transfer the contents of the filter into the flask by means of a camel's-hair brush, and dry to a constant weight.

Dieterich states that he shall adhere to acetic ether (which was replaced by ethylic ether in the last German Pharmacopœia), since this yields a whiter morphine.

Should the full amount of filtrate (42 and 36 Gm.) directed in the above process not be obtained, it is only necessary to apply a little pressure upon the contents [a piece of filtering paper is best put on top first] by means of a glass rod.

Regarding the different alkalies or alkali carbonates which have been recommended or are available for the final separation of morphine, Dieterich shows that their solvent power over morphine already separated from opium is by no means in proportion to the same power over it while yet a constituent of opium.

One (1) part of morphine requires for solution the below-named parts of the (*a*) normal volumetric and (*b*) one-tenth normal volumetric solutions of the following alkalies and their carbonates:

	Normal.	One-tenth Normal.
Ammonia Water	19°	505
Ammonium Carbonate, clear	2,500	3,300
Ammonium Carbonate, white	2,500	3,125
Potassa, caustic	.....	36
Potassium Carbonate	264	500
Potassium Bicarbonate	2,500	4,166
Soda, caustic	.....	30
Sodium Carbonate	714	1,111
Sodium Bicarbonate	2,272	3,125

According to these figures, potassium carbonate is about equal to ammonia, and the bicarbonates of potassium and sodium might be expected to be still more efficient. But experiment showed the remarkable fact that an opium yielding with ammonia water 14.05 to 14.12 per cent of morphine, yielded with the other alkalies, etc., a lesser quantity—with some of them an enormously reduced percentage:

With	After standing 6 hours.	After standing 12 more hours.
Potassium Carbonate	12.50	....
	12.95	....
Potassium Bicarbonate	2.62	2.02
	2.05	3.01
Sodium Carbonate	13.10	....
	12.80	....
Sodium Bicarbonate	3.62	5.12
	5.50	3.50
Ammonium Carbonate (clear)	6.05	....
	6.62	....

It follows, therefore, that the solvent power of alkalies over morphine is independent of their relative power of separating morphine from opium.

Regarding the time during which the shaking should be continued in the last step, Dieterich advances experimental proof that shaking during ten minutes invariably causes a small but decided increase of morphine over agitation during only five minutes. The increase amounted to 0 11 to 0.34 per cent of the total amount of morphine separated.

Ethyl Bromide and "Ethylene Bromide."

Donoth has recently proposed the employment of dibromide of ethylene, often called, for brevity, bromide of ethylene [German, Æthylenbromid], as a remedy in epilepsy, he having found it quite efficacious in doses of 1½ to 5 grains, given several times a day. It is, however, necessary to give *a warning* respecting its use. Several accidents are on record, caused by this substance having been given, through mistake, instead of ethyl bromide, which is a narcotic and anæsthetic, itself by no means free from danger when used by inhalation.

Ethyl bromide is prepared from alcohol by acting upon it with iodine in the presence of phosphorus. The formula of the compound is C_2H_5I. It is a colorless, very volatile liquid, having a powerful ethereal odor, and a sweetish and warm taste. Its specific gravity is 1.1419 at 15° C.

Ethylene bromide (or dibromide) has the composition $C_2H_4Br_2$. It is prepared by heating the preceding with bromine, under pressure, to a temperature of 180° C. Below 9.5° C. it is a crystalline solid. At the ordinary indoor temperature it is a liquid, specific gravity about 2.200 at 15° C., and boiling at 131.6° C.

Chemically Pure Zinc.—According to the investigations upon the "chemically pure zinc" of the market, made at the Imperial German Physico-technical Institute, this article is always contaminated with lead, and frequently also with iron, cadmium, sulphur, phosphorus, arsenic, and many other substances. It has been found that for the purpose of obtaining absolutely pure zinc it is necessary to follow the wet process by electrolysis, and this again by distillation in vacuo.

OFFICERS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION ELECTED AT THE NEW ORLEANS MEETING.

Mr. Alex. K. Finlay, the president, came to the United States from Ireland when but a lad, and the following year (1859) began the study of pharmacy in the store of his brother, Thos. K. Finlay, at the corner of Court and Julia streets, New Orleans. In 1867 he became a partner, and in 1874, on the death of his brother, the sole proprietor. He has conducted the business at the same place until the present time.

He graduated in pharmacy at the University of Louisiana in 1873; joined the American Pharmaceutical Association in 1883; was president of the New Orleans Pharmaceutical Association in 1883–4; president of the Louisiana Pharmaceutical Association in 1885; second vice-president of the American Pharmaceutical Association in 1887, and local secretary in 1890. He is a member of the Louisiana State Board of Pharmacy, and chairman of the Health Committee of the City Council, of which he is a member.

Mr. George J. Seabury, first vice-president-elect of the Association, has such excusable objection to being thrust—as it were—before the public gaze, that our reporter has been unable to secure from him even an admission of his having been born (having no personal recollection of the circumstances attending that period of existence, this is, perhaps, but natural). In the light of subsequent events, that fact may, however, be taken for granted. He has, moreover, continued to live in spite of common belief that the truly good die young. Indeed, he has lived very much and miscellaneously as regards residence and occupation; for to say that he is a manufacturer of pharmaceutical and surgical specialties, and that his place of business is New York, would describe his vocation about as ineffectually as would a description of George Washington be as "a native of Virginia and a military man when not otherwise engaged." The events of his life have been so numerous, and his personal acquaintance with pharmacists so extensive, that it will be far easier for us and more interesting to our readers to mention here only a few things not commonly known, and so lighten the labors of the man (of the late twentieth century, we trust) who shall edit his memoirs, and allow his friends to recall other and more familiar details.

The name Sea-Borough (from which the present sire-name was doubtless derived) would indicate an ancestry of roving mariners in the days when Britain's sons were trained to adventure. In this we may trace the foundation of the tendency of the subject of our sketch to remain but a short time at rest in any one place and to be incessantly active and progressive. This characteristic has sometimes been made use of in advertisements by the firm of Seabury & Johnson, in which Mr. Seabury is represented as he appears when on one of his numerous flying trips clothed with winged cap and sandals. The treatment of the subject is of course conventional and avoids the need for changing the costume to suit the fashions for the time in vogue.

Things which have attained to approximate perfection have few attractions for Mr. Seabury. He is inherently and constitutionally a reformer, and the more intricate and unanswerable the problem the greater its charm for him. It was this trait which achieved the method of creating a plaster which would hold on to everything excepting its medicinal ingredient, and, in spite of its adhesiveness in other respects, would yield its strength, when applied to the skin, as readily as its originator delivers himself of an after-dinner speech or a draft for a scheme to regulate price cutting. His line of adhesives does not, however, embrace "sticky fly-paper," for the reason, it may be presumed, that no flies were ever known to light on George J. or his wares, and this would manifestly be a serious defect in this particular instance.

Mr. Seabury's friends have at times been unable to understand the *raison d'être* for a certain solemnity of manner and *ex-cathedra* style of oratory which is an occasional characteristic; but the following extracts from a revised edition of Chambers' Encyclopædia may, perhaps, indicate their origin:

"SEABURY, SAMUEL, D.D., 1729-96; b. Conn.; graduated at Yale College in 1748; studied medicine and theology in Scotland; ordained in London in 1753; pastor of churches in New Brunswick, N. J.; Jamaica, Long Island; Westchester, N. Y., 1756–75; suspected of being the author of some Tory pamphlets, was imprisoned for a while in New Haven; resided during the Revolutionary War mostly in New York; went to England in 1784, and was consecrated bishop of Connecticut; chosen rector of St. James' Church, New London, Conn.; took part in revising the Prayer-Book and preparing the constitution for the American Episcopal Church which was adopted in 1789.

"SEABURY, SAMUEL, D.D., 1801-72; b. Conn.; ordained priest in the Protestant Episcopal Church in 1827, was missionary on Long Island; professor of languages at Flushing Institute, 1830–34; editor of *The Churchman*, 1834-49; rector of the Church of the Annunciation, 1838–68; professor of Biblical learning in the General Theological Seminary, 1862–72. He published "The Continuity of the Church of England in the Sixteenth Century; *Supremacy and Obligation of Conscience; The Theory and Use of the Church Calendar.*"

With the lives of these two Seaburys before us it is not difficult to trace many resemblances. George J. has also been in England to "take orders," and it is generally understood that he has continued to get them—and large ones at that—ever since. As for missionary work, he is doing it constantly, and does not confine himself to Long Island, as did one of his illustrious predecessors, but preaches the gospel of brotherly love and harmony to every backsliding "cutter" on the continent. His linguistic proclivities are phenomenal.

It would be quite consistent with the foregoing that Mr. S. should have been engaged in the evolution of a plaster with which the creed of any particular church may be incorporated as an active ingredient. As a part of the ceremonial of ordination, each candidate for the ministry may have such one of these theological plasters applied to his back as his conscience at the time may indicate, and thereafter he will give no further trouble. *That* creed will *stick*, and there will be no court of inquiry or episcopal decision required for him. The properties of the plaster will be so adjusted as to slowly transude and permeate the system, and nothing short of actual flaying will admit of theological reformation. A possible difficulty delays for the present the publication of further details of this mode of insuring orthodoxy—that is, the contingency of the wearer of a High-Church plaster-creed applying an agnostic variety to his ventral surface. In such case the antagonistic influences might render his theology somewhat unstable. This involves some further considerations, which may safely be left to the originator of the method.

In conclusion, it may be said that the *legend* of the firm has always been "Sea Bury *and* Johnson!" but of late years the custom has been to See-bury only, and Johnson has become only a tradition—nobody sees him.

Mr. Willard H. Torbert, second vice-president, is a native of Camden, N. Y. After leaving Princeton College, New Jersey, having prepared for the same at the seminary in Fulton, N. Y., he entered the drug business with Kenyon, Potter & Co., Syracuse, N. Y., subsequently purchasing a drug stock at Adams, Jefferson County, N. Y., from which point he removed to Dubuque in 1868, where he has built up what is now one of the largest drug trades in Iowa.

This house does a large jobbing trade, supplying numerous customers in the Northwestern States and Territories; and it is proper to state that their valuable business has been acquired through the excellent character of the goods handled. Mr. Torbert has always made it a special aim to keep up the standard of his articles, and send out only such as are of known purity. This, combined with favorable prices and honorable, courteous dealing, has made his trade what it is, large and successful. His store is centrally located in the city of Dubuque, is large, elegantly fitted up, richly and abundantly furnished, and from cellar to upper story is supplied with a heavy stock, with warehouse literally packed with goods. The retail department does a satisfactory business, and is under the general supervision of Mr. Torbert.

Mr. Torbert is president of the Iowa State Pharmaceutical Association, and was unanimously re-elected a second term, an honor never before bestowed in the history of the Association.

In the fall of 1890 he was earnestly besought to accept the candidacy for Secretary of State, but positively declined to be considered a candidate, and is now frequently mentioned throughout the State as an available candidate for Governor. But Mr. Torbert is so devoted to his business and the interests of pharmacy that political honors are not a temptation to him, and he positively refuses the use of his name in connection with any office, uniformly saying "that he is only in politics for his friends, for himself nothing."

As a writer he is strong and clear, and in Iowa as an after-dinner talker is known as Iowa's Chauncey Depew.

Dr. Charles Rice, reporter on Progress of Pharmacy, was born at Munich in 1841, of Austrian parents, the father's family name being Reis, in another (Vienna) branch Reiss. Two brothers of his father, who had settled in the United States between the years 1836 and 1839, adopted the English method of spelling the family name, and it was at the advice and desire of his only surviving uncle, then engaged in business at Green Bay, Mich., that the subject of this notice adopted the same spelling when coming to this country. He received his education in public and private schools and in seminaries at Passau, Vienna, and Munich. Having, at an early age, special opportunities of acquiring a knowledge of various languages, one of his relations being an accomplished classical scholar and master of several Oriental languages, he felt drawn towards linguistic studies, receiving encouragement and special instruction from several prominent scholars, among them Dr. Gaugengigl, of Passau, and Prof. Marcus Jos. Mueller and Abbot Hanneberg, of Munich. A financial crash having crippled the resources of his parents, so as to render it necessary for him to seek a more remunerative livelihood, he was urged by his uncle to come to the United States, and to prepare himself as far as possible for a professional and technical career, which advice he followed, receiving aid and assistance from Prof. Winkler, Dr. Stein, Prof. Wittstein, and others. The death of his parents having finally thrown him upon his own resources, he proceeded first to England, and afterwards took passage to this country. The War of the Rebellion being then (1862) in active progress, he entered the U. S. Navy, on board the sloop-of-war *Jamestown*, commanded by Captain Cicero Price, lying at Philadelphia and bound for a cruise around the world. Having received the appointment as surgeon's steward (equivalent to apothecary), and the vessel having terminated its long and interesting cruise by its arrival in San Francisco in the fall of 1865, he was honorably discharged the service and returned to New York, where he at once entered the service of the Department of Public Charities and Correction. Being appointed apothecary of the Bureau of Medical and Surgical Relief, when this was first organized, he was subsequently promoted to a similar position at Bellevue Hospital; and having meanwhile continued his chemical studies under competent instructors, he received the appointment of chemist at the General Drug Department, and finally chemist of the Department of Public Charities and Correction, which office he now holds, in addition to that of superintendent of the General Drug Department, as successor to the late John Frey. In 1867 he became a member of the College of Pharmacy, and was elected a trustee in 1870, serving as such up to the present time. In 1872 he came very near losing his life by the explosion of an apparatus whilst making apomorphine. In 1877 he became chairman of the Pharmacopœia Committee of the Amer. Pharm. Assoc., which drafted the report adopted by the convention of 1880 as the basis for the Sixth Decennial Revision. He was also elected a member of the Committee of Revision and Publication, and became its chairman. By the Pharmacopœial Convention of 1890 he was placed upon the present Committee of Revision, which latter again elected him chairman. In 1879 the University of the City of New York conferred upon him the honorary degree of Doctor in Philosophy, and in 1890 the New York Academy of Medicine elected him an Honorary Fellow. Since 1876 he has been Associate Editor of this journal.

While his contributions to pharmaceutical literature are voluminous, the duties of his position in the Department of Public Charities and Corrections have, of late years, prevented his attendance at meetings of the A. P. A., excepting when they were in the neighborhood of his home. His familiarity with ancient and various modern languages has enabled him to render service to his friends on many occasions; but the engrossing nature of other duties leaves him little time at present for their study, which used to be a welcome recreation, and made him then an active member of several Oriental Societies.

When the ideal Pharmacopœia has been elaborated, Dr. Rice may, perhaps, find time to cultivate a further acquaintance with them. How he will be able to report to the A. P. A. the Progress of Pharmacy in addition to what he has already undertaken, is not readily apparent.

Mr. Carl Svanté Nicanor Hallberg, the chairman of the present Section on Scientific Papers, and the secretary of the preceding Section, came from Sweden to this country with his parents in 1869, when he was thirteen years old. He was born in Helsingborg on October 13th, 1856, and began his attendance at school when only four years of age. At nine he entered the "Gymnasium," or High School, and continued there until his immigration. His first residence here was at Altoona, Pa., where he entered the drug business the following year. After an apprenticeship of four years he became a student in the Phila-

delphia College of Pharmacy, graduating in the "Centennial" class of '76, and, taking the immortal Greeley's advice, went West. Recognizing the great future of the "City by the Lake," he settled in 1877 in Chicago, which has since been his home. The next year appeared his contributions to the *Chicago Pharmacist*, and from 1879 to 1885 he engaged in the manufacture of pharmaceutical preparations, contributing, meanwhile, many papers to pharmaceutical journals, notably on "Powdered Extracts" and "Pharmaceutical Preparations of Ergot." In 1884 he became a writer for the *Druggist*, which, embracing the *Chicago Pharmacist* in 1886, became the *Western Druggist*, of which he is the editor. About 1885 he originated a postal system of instruction for pharmacy students as a preliminary to college attendance, which resulted in the establishment of the National Institute of Pharmacy, and has provided a course of reading for several thousands of young men, many of whom are not in a position to enable them to attend a college of pharmacy.

He was the original Illinois member of the National Formulary Committee, and since its completion has been a "member-at-large."

At the Pharmacopœial Convention at Washington in 1890 he was elected a member of the seventh decennial Committee of Revision and Publication. In the same year he was elected secretary of the Illinois Pharmaceutical Association, of which he is a charter member and an active worker on important committees. From 1887 to 1889 he was associated with Mr. C. L. Feldkamp in the retail drug business, the firm being the recipient of the gold medal offered by the American Pharmaceutical Association in 1888 "for the best exhibit by a retail pharmacist of preparations of his own manufacture."

He has been actively associated with the Chicago College of Pharmacy for more than ten years, and served an unexpired term as trustee. In 1890 he was elected lecturer and demonstrator in pharmacy to fill a vacancy created by the resignation of the faculty. Aside from pharmacy, he takes an active interest in questions of political economy, and was one of the chief promoters among Chicago pharmacists of the project of holding the next World's Fair in that city.

The Opium Monopoly in the Dutch Indies.

Not only the Government of British India, but also that of the Dutch-Indian colonies, derives a very large proportion of its revenue from opium. In the Dutch colonies no opium is grown, but the sale is the monopoly of the Government, who import the whole of the quantity to be consumed, and retail it at their own price to keepers of opium houses (mostly Chinese).

Recently the Chinese opium dealers at Deli, in Sumatra, where the famous tobacco plantations are situated, have sent in strong complaints of the quality of opium supplied by the Government. They state that, instead of the smoking opium, solutions of morphia are being sold in vials containing 60 Gm. of liquid to about 0.02 to 0.03 Gm. of morphia. The solutions are cheaper than smoking opium. The dealers are now petitioning the Government to prohibit this traffic, especially on the ground that the quantity of morphia present in each vial is sufficient to cause death, or, at any rate, severe symptoms of poisoning.

The opponents of the opium traffic, however, defend the sale of the solutions, for the reason that the opium smokers, by using them instead of the opium, are gradually weaned from the practice of taking opium.—*Chem. and Drugg.*

Detection of Oil of Camphor when Used as an Adulterant.*

BY A. B. STEVENS.

In 1888 the writer presented to this Association a test for the detection of oil of camphor when it is used in the adulteration of oil of peppermint. The test, with a slight modification, is as follows:

Place a drachm of nitric acid (specific gravity 1.42) in a test tube, add 1 drop of the suspected oil, and agitate gently. The color of the mixture may vary from light yellow to red. If the oil is pure the red color will disappear in from twenty minutes to two hours. If oil of camphor is present the red color will remain for twenty-four hours, and even longer, if not exposed to too strong a light. This test is reasonably delicate, as less than 5 per cent of oil of camphor may be detected by it.

Since the paper of 1888 numerous tests have been made to ascertain to what extent it can be relied upon for the detection of oil of camphor in other volatile oils. The greatest difficulty encountered was in obtaining perfectly pure oil. In some cases they were necessarily obtained by distillation. For a year or two all of the oil of cajuput met with gave results similar to those of oil of camphor. Indeed, one manufacturer stated that pure oil of cajuput would always give similar results. However, since that time I have found two samples of oil of cajuput, neither of which gave the test for oil of camphor; one of these samples was from an original package from J. E. Davis & Co., and the other was presented by the agricultural department. It is, therefore, a reasonable conclusion that the test may be relied upon for the detection of oil of camphor when present in oil of cajuput, and, further, that nearly all of the oil of cajuput of the market is adulterated with oil of camphor.

By numerous experiments it has been ascertained that this test may be relied upon for the detection of oil of camphor in the following volatile oils, viz.: Orange peel, orange flower, erigeron, lavender flowers, rose, juniper wood and berries, cedar wood, hemlock, lemon, lemon grass, thyme, cajuput, citronella, eucalyptus, anise, rosemary, caraway, bergamot, cloves, coriander, cassia, and cinnamon. Pimento gives a red color almost identical with oil of camphor, but the reaction is exceedingly violent and gives off dense brown fumes. Oil of nutmeg gives similar results. Strong sunlight will completely bleach out the red color produced by oil of nutmegs in less than an hour, and that produced by pimento in four hours, while that produced by oil of camphor requires twelve hours.

The only oil I have thus far found that gives identical results with oil of camphor is oil of sassafras, and these two oils are somewhat similar, as both contain saffrol.

University of Michigan.

Mackenzie's Eye Lotion.

Corrosive Sublimate	1 gr.
Chloride of Ammonium	6 gr.
Cochineal	1½ gr.
Alcohol	1 fl. dr.
Water	8 fl. oz.

Mix, and filter after twelve hours.

This formula is given by the *Chem. and Drugg.* Though it is meant there for British weights and measures, it will make scarcely any difference if our measures are used.

The Volatility of Creosote.—A. Reissmann has observed that when creosote is exposed to the air in a watch glass, it loses 65.6 per cent of its original weight during four weeks, by evaporation. Creosote pills coated by butter of cacao, and also kept during four weeks in a paper box, lost 22.4 per cent of creosote, and sugar-coated creosote pills 5.6 per cent. This shows that the volatility of creosote is considerable. Up to the present, therefore, the capsule appears to be the best vehicle for administering creosote [or else the gelatin-coated pill]. If creosote is to be dispensed in uncoated or sugar-coated pills, the latter should at least be kept in glass vessels.—*Pharm. Centralh.*

* Paper read before the American Pharmaceutical Association.

Lead Plaster vs. Lead Oleate.*

BY A. B. STEVENS.

THE successful manufacture of lead plaster requires hours of almost constant watching; should it be left for a time without stirring, oxide will collect on the bottom into a compact mass, and is with difficulty disintegrated. The heat used is another source of difficulty; the heat of a water bath is insufficient, and a sand bath or direct flame is apt to burn the plaster. No exact degree of temperature can be established, as the olive oil and lead oxide taken separately will bear a much higher degree of heat than after they have combined to form an oleate. Therefore a decreased temperature should be employed toward the close of the operation.

The Pharmacopœia requires that lead plaster shall be white. This requirement should be changed, for though we may obey the spirit of the requirement, and obtain a very light-colored plaster, we cannot obey the letter of the requirement and obtain a perfectly white plaster.

In view of the above considerations, would it not be well to discard lead plaster and introduce in its stead lead oleate, which is easily and quickly made according to the directions given in the National Formulary?

With this thought in mind, I have prepared lead plaster and lead oleate, and also diachylon ointment made from each, which I here present for your consideration, with other samples, as follows: Lead plaster and diachylon ointment made by the U. S. P. method from pure olive oil, from commercial olive oil, also from cottonseed oil. It seems to make very little difference in the result whether pure oil or cottonseed oil is used in the manufacture of the plaster. Samples of diachylon ointment were made from oleate and from lead plaster, substituting white petrolatum for olive oil; substituting, also, liquid petrolatum for the olive oil. The ointment made with the latter ingredient is too soft, while that made with petrolatum is of good consistence, and I am inclined to believe that it would be an improvement on the U. S. P. ointment.

The sample of olive oil used in these experiments was presented by General George W. Hooper, of Sobra Vista, Cal., and was expressed from olives grown upon his own olive farm. It is one of the finest oils the writer has ever seen.

UNIVERSITY OF MICHIGAN.

Syrup of Lactucarium.*

BY G. H. CHARLES KLIE, ST. LOUIS, MO.

THE present formula reads as follows:

Fluid Extract Lactucarium	5 parts.
Syrup	95 "
To make	100 parts.

Mix them.

The first step in making syrup of lactucarium is to make the fluid extract.

The formula is:

Lactucarium in coarse pieces	100 Gm.
Ether	100 Gm.
Alcohol,	
Water	each a sufficient quantity.

To make 100 C.c.:

Add the lactucarium to the other contained in a tared flask having the capacity of 600 C.c., and let it macerate for twenty-four hours; then add 300 Gm. of water, and shake the mixture well. Fit a bent glass tube into the neck of the flask, and, having immersed the glass in hot water, recover the ether by distillation. When all the ether has distilled over, remove the tube, and after thoroughly shaking the contents of the flask, continue the heat for half an hour. Let the mixture cool. Add 100 Gm. of alcohol, and enough water to make the whole mixture weigh 500 Gm. After maceration for twenty-four hours, with occasional agitation, express and filter the liquid. Return the dregs to the flask and macerate them with 200 Gm. of a mixture of alcohol and water, made in a proportion of 1 part of alcohol to 3 parts of water; repeat the maceration 2 or 3 times successively with fresh portions of the mixture, until the dregs are tasteless, or nearly so. Mix the liquids thus obtained, and concentrate them by means of a water bath (the first-expressed liquid by itself) until the combined weight of the liquids is 60 Gm.; mix the liquids, add 40 Gm. of alcohol, and let the mixture cool in the evaporating vessel, stirring the mixture frequently, and during the intervals keeping the vessel well covered. When cool add enough alcohol to make the mixture weigh 100 Gm.; transfer the liquid to a flask, and add enough water to make the mixture measure 100 C.c., using the water so required to rinse the evaporating vessel. Shake the mixture occasionally during several hours (and frequently, if a portion of the precipitate is found to be tenacious), and when a uniform mixture results set it aside for twenty-four hours, so that any precipitate formed may subside. Decant the clear liquid, transfer the precipitate to a filter, and, after thoroughly draining it into the decanted liquid, wash it well with a mixture of alcohol and water, made in the proportion of 3 parts of alcohol to 4 parts of water, until the washings pass tasteless. Concentrate the washings by evaporation to a syrupy consistence, mix with the decanted liquid, and add enough of the last-named mixture of alcohol and water to make the whole measure 100 C.c. Lastly, after twenty-four hours, having meanwhile shaken the fluid extract occasionally, filter it through paper.

I believe the average druggist, when he reads the formula, will hesitate and consider whether to make the extract or not, and will generally arrive at the conclusion that he will not. He then buys the fluid extract and mixes it with simple syrup as directed. This is about the shortest way when he does not want to buy the syrup outright.

I have prepared the fluid extract a number of times, and have found difficulties which I wish to state here.

When the quantity of lactucarium as given in the formula has been exhausted with the prescribed menstruum, the directions say: "Concentrate the tincture—first portion separately—until the combined weight is 60 Gm." At this stage quite a quantity of resin is found in the evaporating dish. Here is the critical part of the process. Shall the resinous matter be separated or not? If you leave it in the dish, the syrup made from the resulting extract will be turbid; if you separate the resin, the resulting syrup will be clear. The wording of the formula seems to imply that the resin is not to be separated, but, on the other hand, if you want a clear syrup it ought to be separated. It would be well for the Pharmacopœia to state clearly its intention by saying, for instance: "Do not separate the resinous precipitate," etc. It would thereby be made perfectly clear that a perfectly clear syrup is not wanted. But since many physicians want a clear syrup—in fact, it seems that more physicians want the clear than the turbid syrup—a formula might be added to make a clear syrup.

The syrup made from the fluid extract with the resin in it, of the present Pharmacopœia, is somewhat clearer than the syrup made according to the Pharmacopœia of 1870.

I would propose the following formula:

Take of

Lactucarium	5 parts.
Sugar	5 "
Syrup	100 "
To make	100 parts.

Rub the lactucarium and sugar together to a coarse powder, add this to the syrup contained in an evaporating dish. Place on a vapor bath and keep the temperature at 140° F. for six hours. Strain while warm, and add sufficient water to make the product weigh 100 parts.

It will take, say, seven hours to make the syrup according to this formula, whereas it will take seven days to make it according to the formula of the Pharmacopœia.

* Paper read before the American Pharmaceutical Association.

The Drug Trade of To-day and the Pharmacopœia.*

BY JOHN COALTER MEANS, NATCHEZ, MISS.

THE question is sometimes asked: "Is the Pharmacopœia becoming obsolete?" And as startling as the inquiry sounds, the tendencies of the times seem to justify it. Many physicians seem scarcely aware of the existence of such an authority, and prescribe the modern "proprietary remedies" and "pharmaceutical specialties" almost to the exclusion of legitimate pharmacopœial preparations. Many pharmacists seem equally gnorant in this respect, and depend on the manufacturing establishments for most of their stock, and, for the few preparations they compound themselves, refer to the convenient label on the fluid extract bottle of the manufacturer instead of to the Pharmacopœia—never thinking whether or not the products they dispense conform to any authoritative standard.

As to the manufacturers, how few of them seem to regard the Pharmacopœia! In their kind efforts to relieve the poor, overworked retailer, they furnish those very convenient concentrated fluids which are supposed to produce, by dilution with suitable menstruums, completed pharmacopœial preparations; but how often is it the case that the product so made is widely different from what it should be in appearance and character!

The causes of this condition of affairs are numerous. Prominent among them is the character of the present Pharmacopœia.

Were that work of a more practical character, and better adapted to meet the wants of the modern drug trade, it would be much more used than it now is. The modern "elegant pharmaceuticals," so assiduously pushed by the manufacturers, have probably done more than any other cause to displace the Pharmacopœia, and it is to this class of preparations that the Committee of Revision should give their attention.

Palatability seems to be an essential in modern pharmaceuticals, and it is certainly an invaluable aid in therapeutics. This should be recognized and regarded in the preparation of remedies whenever it can be done without detriment to the therapeutic value.

That the retailer is also to blame is indisputable. Were he more zealous in compounding and dispensing pharmacopœial products, and in advertising them to the physicians, he would be better able to cope with the modern "proprietary remedies" which are thrust upon him by the manufacturers and prescribed by physicians.

For instance, how few doctors use the deodorized tincture of opium, and how many proprietary preparations of similar character, but of extravagant cost and doubtful worth, are daily presented? How many highly extolled syrups of the hypophosphites are used, almost to the exclusion of a meritorious officinal article?

Now, if the pharmacist would prepare these and similar preparations, and advertise them to physicians (for this is an age of advertising), by samples or otherwise, they would be much more largely used, to the benefit of the patient and profit of the druggist.

That the modern manufacturers have done good work for medical science is undeniable. They have also relieved the retailer of much disagreeable work, formerly incumbent upon him, and, at the same time, improved the products; but when they propose, as some of them now do, to set up pharmacopœias of their own, and to dictate to the physician what he shall prescribe, and to the pharmacist what he shall dispense, it is certainly going a little too far. Shall the coming druggist, through their influence, become a mere mixer and tradesman, simply a servile distributer for these manufacturers, not knowing the constituents of the articles he dispenses, nor their mode of preparation?

As a suggestion to the Committee of Revision of the coming Pharmacopœia, I would submit this: Why direct that tincture of opium shall be made from the powdered drug? Would it not be much more practical to prepare it from the crude "gum," and then assay by alkaloids, or (if that is considered too difficult for the average druggist) by amount of dry extract (even this would produce a more constant preparation than the present formula), and bring to a prescribed standard? As it is now, probably ninety-nine out of a hundred druggists throughout our country prepare this tincture from the crude "gum" without making it conform to any standard. In the face of this, why should the powder be required? Let us consider the process for preparing tincture of opium as now required. First the gum is deprived of its water and powdered with considerable labor and expense, and then water is added to this powder. Why is it necessary to deprive an article of one of its constituents and then add the same ingredient to it? Certainly this is needless labor and expense.

I hope the present revision will bring the Pharmacopœia up to the present day in every respect, and dispense entirely with obsolete preparations and antiquated methods; recognizing and complying with the demand for modern pharmaceutical remedies and preparations, making it what it should be—the authority for all preparations prescribed by American physicians and dispensed in American pharmacies.

But no matter how excellent the work is made, unless we, the pharmacists of the United States, give it our hearty support and respect, it cannot accomplish its purpose.

* Paper read before the American Pharmaceutical Association.

Medicated Oils for Hypodermic Injection.

SEVERAL fixed oils, particularly those of olive and almonds, have for some time past been used by numerous European practitioners as vehicles for the hypodermic administration of certain remedies, and to some extent this has also been practised in this country.

In a recent issue of *Le Progrès Thérapeutique*, A. Vicario points out the necessity of carefully sterilizing the respective liquids, and gives various practical hints, which we give here in abstract.

Preparation of the Solutions.—This is either made by simply mixing the ingredients, if liquid, or by producing solution by means of a water bath, in which latter case the most volatile substance must be added after the others have become liquid.

Sterilization of the Solutions.—The liquid is placed in a sterilizing flask. [Pasteur's retort or Chamberland's pipette flask is mentioned by the author. Any bottle with long and narrow neck, which may be stoppered with a pellet of cotton, may be used.] The flask is then heated in a sterilizing oven at a temperature of 120°.

Filling into Bottles.—The liquid is now transferred, under proper precautions, into previously sterilized small bottles. If a Chamberland's flask is used, which has a bent neck and is drawn out to a fine tube fused at the end, the latter is broken off after sterilization is completed, the tube pushed through the cotton stoppers of the small bottles, and the liquid thus transferred without risk of re-introducing germs or bacteria.

Formulas.—The most usually employed preparations, which are particularly used in *phthisis*, are the following:

Picot's Solution.

Guajacol	5 Gm.	75 grains.
Iodoform	1 Gm.	15 "
Olive Oil, Liquid Vaseline, āā eq. parts to make	100 C.c.	3½ fl. oz.

Pignol's Solution.

Eucalyptol	14 Gm.	216 grains.
Guajacol	5 "	75 "
Iodoform	1 "	15 "
Olive (or Almond Oil), to make	100 C.c.	3½ fl. oz.

Morel-Lavallée's Solution.

Eucalyptol	12 Gm.	185 grains.
Guajacol	5 "	75 "
Iodoform	4 "	60 "
Olive Oil, to make	100 C.c.	3½ fl. oz.

The hypodermic dose of these solutions is from 3 C.c. to 12 C.c. (50 to 210 minims) in twenty-four hours. Besides the above, there are also in use plain solutions, in olive or almond oil, of creosote (1 : 15), eucalyptol (2 or 4 : 10), etc.

Notes on Drugs and Chemicals.

(From the April Report of Gehe & Co., of Dresden.)

Cinchona Barks.—In spite of the reduced export of bark from Ceylon during 1890, the price fell still lower instead of advancing. The present extent of cinchona culture, and the improvements in the quality of the trees—some of them yielding as much as 9 per cent of alkaloid—make it unlikely that there will be any advance. The situation of the cinchona growers is a very unsatisfactory one, over-production having been the cause. With a view of remedying this somewhat, the Java Government ordered the destruction of *two* millions of cinchona trees upon four plantations. Yet even this is not expected to do much good. For the manufacture of quinine the only barks now relied upon are those from Ceylon and Java. While the export from the former is constantly diminishing,

1885	14,097,142 lbs.
1886	14,838,402 "
1887	11,996,039 "
1888	13,251,120 "
1889	9,433,715 "
1890	8,655,990 "

that from Java is steadily increasing, from 4,360,000 pounds in 1888 to 7,184,000 pounds in 1890.

Quillaja Bark.—Since last fall this article has advanced in price, and probably all new supplies now in transit are already sold. The Chilian war is likely to prevent new shipments for some time.

Musk, natural and artificial.—Perfumers are gradually losing their faith in the artificial musk (musk "Baur"), which has now been in use for some time. While it is certainly more economical in the beginning, it has the disadvantage that it loses its odor after a short time.

Some time ago certain journals made the statement that sulphate of quinine was an efficient reagent—added to a liquid containing musk or its odor—to ascertain whether natural or artificial musk had been used therein. It was said the sulphate of quinine destroyed the odor, if it was artificial musk. Gehe & Co. now inform us that this is a mistake, but that *hydrochlorate of quinine* destroys or masks the odor of *natural musk*. On the other hand, ethereal oil of bitter almonds and other substances containing hydrocyanic acid neutralize the odor of *artificial musk*.

Opium.—The depressed condition of the market in Asia Minor still continues, and there is no prospect of a relief. The next harvest promises to be an extraordinarily good one, and this is one of the reasons why purchasers withhold orders. Many holders of stock will no longer be able to keep it. According to reports from Constantinople, about 90 per cent of the opium on storage there has been hypothecated to banks and other financial institutions. Naturally, these lots will, sooner or later, come under the hammer by sheer necessity. It seems, therefore, that prices may go lower still, though the market has become a little stiffer in consequence of considerable orders from the United States.

Mexico is said to make earnest efforts towards the cultivation of opium, chiefly with a view—so it is said—of supplying the Chinese market, which might raise a dangerous competition against India.

Tea.—The enormous advance which Indian teas have made during the last few years may be seen from the fact that the imports of tea into Great Britain during 1889 amounted to:

93,203,927 lbs.	of Chinese tea.
34,246,224	" Ceylon "
101,052,264	" India "

[The two latter are mostly consumed in England, and are gradually displacing the Chinese teas. A notable quantity of East Indian teas is also consumed in this country.—ED. AMER. DRUGG.]

Guajacol and its Derivatives.—It was announced some months ago that several derivatives of guajacol were about to be introduced as supposed efficient remedies in phthisis, as substitutes for plain guajacol. Benzoyl-guajacol has been thus introduced under the name benzosol. Recently a salicyl-guajacol and a styracyl-guajacol have been added. Gehe & Co. believe that there is a chance for these remedies, since the treatment of phthisis by creosote has recently been revived by Sommerbrodt.

Benzosol is given in doses of 15 to 30 grains; even as much as 150 grains per day have been borne without bad effects.

Cornutine.—Both the alkaloid (from ergot, after Kobert) and two of its salts, the hydrochlorate and citrate, are now available. The dose is 5 Mgm.

Glycerin.—The new German Pharmacopœia contains a test (supposed to be for acrolein) which is as follows:

"On heating 1 C.c. of glycerin with 1 C.c. of water of ammonia to boiling, and then adding 3 drops of solution of nitrate of silver (1 in 20), neither a color nor a precipitate should appear in the mixture within five minutes."

All German manufacturers of glycerin have memorialized the proper Government authorities that they are unable to produce glycerin which complies with this test, as it is too rigorous. This is also affirmed by Gehe & Co., who state that either the test will have to be performed without heat at all, or at least in a water bath at a temperature not exceeding 50 C.

Platinum.—The legitimate increase in the consumption of this metal, for electric purposes, has been greatly exaggerated. It was made the basis of an attempt by certain parties to monopolize the market by purchasing all the Government product in the Ural mines (platinum mining is a Russian Government monopoly). But large quantities of the metal came from Russia in an "indirect" (we would say "underground") way, and large amounts of old metal were dumped on the market, all of which brought the price considerably down again. Nevertheless, it will be some time before the platinum market will have resumed its normal tone.

Iodophenin: A New Antiseptic.

A. SCHOLVIEN has found (*Pharm. Zeit.*, No. 40) that when a cold-saturated solution of phenacetin, acidulated with hydrochloric acid, is treated with iodine, a gray precipitate forms which afterwards appears as a mass of crystalline needles. It forms, when dry, a chocolate-brown powder. When recrystallized from glacial acetic acid, it may be obtained in steel-blue crystals.

In preparing this substance on a large scale, it would be necessary to operate with very large quantities of liquid, if a mere aqueous solution of phenacetin were employed. This is avoided by dissolving the phenacetin in glacial acetic acid, and afterwards diluting with water.

The resulting product, called *iodophenin*, meets at 130° C., decomposing at the same time. It contains one portion of its iodine in a more intimate combination than the other. It is soluble in 20 parts of cold glacial acetic acid, more easily in the same liquid when hot, and is also soluble in alcohol. It is difficultly soluble in benzol and chloroform, and insoluble in water. If heated with water, it is decomposed.

Wittkowsky has found that this substance is a most efficient bactericide. [Further reports regarding it are expected shortly.]

Bromol.—This is the name recently given to the well-known compound, tribromophenol, which is produced when phenol or carbolic acid is treated with an excess of bromine in aqueous solution. It has been found to possess strong antiseptic properties, and to be, at the same time, non-toxic.

Rademaker has recommended it for external use, either dissolved in olive oil (1 in 30) or mixed with vaseline (4 in 30). It may also be applied in form of powder, like iodoform, for sprinkling on wounds. In diphtheria or angina due to scarlatina, the throat may be touched with a solution of 1 part of bromol in 25 of glycerin.

The same author has used the substance internally in doses of $\frac{1}{12}$ to $\frac{1}{4}$ grain, in cholera infantum and typhoid fever with success.—*Chem. Centralbl.*, No. 21.

Are the present Patent and Trade Mark Laws of the United States, as applied to Medicinal Products, in Conformity with Common Law, Common Sense, Justice, or Equity? *

I VENTURE to say that this inquiry suggests considerations of which the vast majority of pharmacists and physicians are wholly ignorant. However, this is not to be wondered at, for there are many existing evils whose magnitude and enormity we only recognize in the abstract until they have been brought home to us by some forcible illustration. How many of my readers, or of the many physicians who swear by an iron-bound code of ethics, have ever stopped to consider the influence of our patent laws upon the progress of the science of medicine? A regularly qualified physician would hesitate a long time before prescribing any of the thousand-and-one nostrums which we classify under the opprobrious title of "patent medicines," and yet every practical dispenser knows to what extent they are daily employing antipyrine, sulfonal, and a host of other articles, unconscious of the fact that their manufacture and sale are monopolized under the protection of our revered and respected "Uncle Sam."

During a recent sojourn in Europe the writer, who was a little sceptical of the sweeping claims to proprietary rights circulated by the "Sole Lessees" of Dr. Knorr's antipyrine, purchased an ounce of this article, brought it home with him, and announced his intention to sell it over the counter as he might see fit. This fact came to the ears of Messrs. Lutz & Movius, and as a consequence I was informed by their attorney that unless I immediately discontinued further effort to sell the article, suit would be brought, as they alone were entitled to handle it within the borders of the United States. I could scarcely believe that their position was tenable, and accordingly sought the advice of an eminent patent attorney. By him I was informed that not only could they restrict me in the sale of the preparation, even though I came into legal possession of it on the other side, but that, further, I could be stopped from even using it, if they saw fit.

Now, do not misunderstand me; I am not asking for space in your journal with a view to criticising Dr. Knorr or his representatives, for, so far as I know, they are estimable gentlemen, and have done exactly as would anybody else who had nothing more than a commercial interest in the matter; but this little incident has served to convince me that our patent laws are sorely in need of revision, and if I can command the reader's attention for a brief space I think I can substantiate this opinion, and perhaps influence others to investigate the matter with the same care that it has received from me.

To a proper comprehension of the whole subject, a clear understanding of the nature of a patent is first necessary. What is a patent, and what is its object? A patent is a grant from the Government, extending over a period of seventeen years, wherein the inventor or proprietor shall enjoy the exclusive benefit of his invention. This system was not inspired by a philanthropic desire to reward the inventor, but in order that, as distinguished from periods antedating the establishment of patents, he should make public the results of his investigations, and not conceal them under lock and key. Were it not for the beneficial effects of the patent system as applied to *mechanics* (and please bear this distinction in mind), the telegraph and telephone systems of to-day would probably never have been developed. Professor Morse might possibly have utilized his device in some small way, and Professor Graham Bell would probably have had a telephone line from his house to his barn; for nothing so much as the prospective pecuniary return actuated these gentlemen to spend time and money in bringing their discoveries to a point of perfection where they are available for commercial purposes.

Keeping the above facts in mind, let us compare the effects of governmental protection in the case of a new medicine.

Suppose, for instance, that the discoverers of quinine had secured a patent giving to them a monopoly of its manufacture. Quinine is not a luxury; quinine is not a device which enables us to sit in an easy chair and conduct business at a distance. It is not to be likened to a machine which weaves us broadcloth at a price corresponding favorably with the homespun material with which our forefathers clothed themselves; it is resorted to only where human life is endangered, and must therefore be within the reach of all, whether rich or poor. It is not necessary to tell you how great has been the progress in the manufacture of quinine, or to enter into details with reference to the improvements which have reduced its price from $6 or $7 per ounce to 25 cents. How and why is it that this material has been brought down to a price which makes it available to all? Competition. The whole question is answered by that one word. If Pelletier & Cavenou had patented it, is it likely that they would have reduced their price commensurate with a reduction in the cost of manufacture? Of course not. They would very consistently have said that if the Government thought them entitled to a monopoly of the invention, it would certainly concede the right to benefit by any improvements in their original crude process which they might make, and the consumer would therefore simply be obliged to pay an exorbitant profit.

To come right down to our present day, let us look at antipyrine, the particular product which has induced me to submit this communication. Not only has the inventor in this case secured protection for his process of manufacture, but he has also patented the article antipyrine and trade-marked the name. Therefore, it makes no difference by what method you may prepare the article, you will still be deterred from selling it, and competing manufacturers might just as well sit down and fold their hands until the seventeen years covered by the patent grant have expired. Progress as regards the manufacture of this article is as effectually stopped as though the substance had never been dreamed of, and the very purpose, therefore, of our patent laws has been defeated.

Look at pepsin: suppose Dr. Scheffer, who was really the first man to render the manufacture of pepsin commercially practical, had sought a monopoly of his knowledge, would we have had at our disposal to-day pepsins dissolving 2,000 grains of albumen instead of 200 grains as his precipitated pepsin did? What incentive would he have had to carry his investigations further? When a man has an absolute monopoly, such as that enjoyed by the antipyrine people, his interest in the "dear public," if he ever had any, soon disappears, and "let well enough alone" is thenceforward his motto.

We concede that it is perfectly equitable and just to patent an improvement on a process for the manufacture of any medicine, and even secure protection for the specific product of that process with a view to avoiding the competition which would otherwise be felt from its manufacture in foreign countries; but when the discovery, as in the case of antipyrine, involves something entirely new and before unknown, which, by virtue of its peculiar merit, becomes almost a necessity to the practising physician, then such protection is opposed to the simplest instincts of humanity. Imagine that Dr. Koch's lymph had proved all that we were led to expect from the exaggerated newspaper reports of its use; in other words, an absolute cure for tuberculosis. It was something new, therefore in "this" country patentable. Nothing could prevent the inventor from fixing a price of $1,000 per injection, and to the pauper who could not advance money death must come; whereas our industrious mechanics and others of the middle classes would doubtless be mortgaging their homes or whatever property they might possess for a new lease of life.

In conclusion, I would repeat that patents, as applied to an original discovery in the science of medicine, not only defeat their very object, but are opposed to the spirit and letter of the code of medical ethics which distinguishes the regular physician from the charlatan, by the renunciation of all monopoly of his skill or his knowledge. Wherein are professional men distinguished from the peanut vender of the streets, if it is not in the recognition that they are in a measure philanthropists? Their services must be at the command of necessity. Every successful physician believes and recognizes this. A carpenter could say to the sufferer of the Johnstown

* Special communication to AMERICAN DRUGGIST.

flood: "I will rebuild your house for thus and so. Satisfy me that you can meet the obligation, and I will begin operations," but a physician who would have approached that catastrophe in any such spirit would have been tabooed by every medical society in this country.

It is a matter of some regret to find that the United States Government has been so slow in recognizing the facts above set forth. In France or in Germany—the recognized fountain-heads of scientific work—patent rights to any new medicine, or process for the manufacture of same, are absolutely denied. As a consequence, in Germany antipyrine can be bought for a song as compared with the price established here, and for the simple reason that over half a dozen houses are making it. Therefore Dr. Knorr, the original inventor, has seen that in our country he must look for his principal reward. The United States offers a haven of refuge for all pseudo-scientists of Europe, who, as distinguished from Dr. Koch and all other liberal-minded men, seek to prey upon a suffering public for a reward of their labors.

Under the common law a contract which in any way militates against the public interests is illegal, and I fail to understand how it is that our national legislature has neglected this very important matter of patent laws. I therefore close this communication with my original query, "Are the present patent and trade mark laws, as applied to medicine, in conformity with common law or common sense?"

WILHELM BODEMANN.

239 STATE STREET, CHICAGO, May 28th, 1891.

Modern Dermatological Remedies.

THE following information respecting some of the newer forms of external remedies used in the clinic of Professor Hebra, Vienna, is published in the *Pharmaceutische Post:*

Spray Treatment.—Very frequently an ether spray is used as a vehicle for mercuric sublimate (1 to 2 per cent) and chrysarobin (10 per cent). It is considered that the spray, besides its anodyne properties, presents the advantage of attacking affected parts otherwise difficult to reach, such as those covered with hair. Whilst the mercuric chloride spray does good service, principally in affections of the mucous membrane, the chrysarobin spray is used in mycosis of the skin. The apparatus used is one combined with a ball blower.

Medicated Soaps.—The superfatted medicated soaps introduced by Unna are used in a form as improved by Eichhoff. The basis consists preferably of beef tallow, together with Liquor sodæ two parts, Liquor potassæ one part, and some olive oil. The superfatted soaps employed are the resorcin-salicylic, resorcin-salicylic-sulphur, resorcin-salicylic-sulphur-tar soaps. In these forms the resorcin is claimed to develop advantageously its action antagonistic to inflammation; the salicylic acid is said to dissolve the horny layer of the epidermis and to act as a bactericide; the sulphur also lowers the inflammation; while the tar diminishes the itching and favorably influences the dilated vessels.

Glycerinum Saponatum.—This is an ointment basis, containing a large proportion of glycerin, in the preparation of which a small quantity of a neutral cocoanut-oil soda soap is used. Its composition varies from 80 to 92 per cent of glycerin and 20 to 8 per cent of soap. The glycerinum saponatum is soluble in cold and warm water, and is said to possess the advantageous property of dissolving a large number of substances, and of holding other insoluble pulverulent substances in suspension. To this class belong:

A. OINTMENTS WITH AN ACID BASIS (80 per cent glycerin).—(1) Glycerinum saponatum with salicylic acid (5 per cent), employed especially for the removal of horny epidermal growths; (2) Glyc. sapon. with salicylic acid (5 per cent) and resorcin (5 per cent) combines the properties of the preceding with those of resorcin in diminishing the inflammation, acting as an antiseptic, and promoting the regeneration of the epidermis; (3) Glyc. sapon. with salicylic acid (5 per cent) and creosote (5 per cent) promotes healing without pain in lupus vulgaris, lepra, etc.; (4) Glyc. sapon. with salicylic acid (3 per cent) and tar (10 per cent), useful in scaly eczema with itching.

B. OINTMENTS WITH A NEUTRAL BASIS (92 per cent glycerin).—(1) Glyc. sapon. with zinc oxide (5 per cent), used for cosmetic purposes and in slight cases of eczema; (2) Glyc. sapon. with sulphur (10 per cent); (3) Glyc. sapon. with zinc oxide (10 per cent), used in acne; (4) Glyc. sapon. with iodoform (5, 10, to 50 per cent), said to be remarkably active, purifying and promoting granular action in wounds, ulcers, buboes, and carbuncles; (5) Glyc. sapon. with chrysarobin (10 per cent), approved especially in psoriasis; (6) Glyc. sapon. with hydroxylamine (1 per cent), used in psoriasis of the face and hairy scalp; (7) Glyc. sapon. with ichthyol (5 per cent) renders good service in violent itching of skin affections and arthritic swelling of the joints; (8) Glyc. sapon. with ichthyol (10 per cent) and zinc oxide (10 per cent), as in the preceding, and in incipient eczema; (9) Glyc. sapon. with carbolic acid (2 to 3 per cent) is good for disinfecting the hands and also to relieve itching.

In other cases the vehicle represents a kind of dressing. Among the *Pastes*, the zinc-starch-vaseline paste, with corresponding medication, takes a high place. This paste is used with good result in combination with salicylic acid (acid. salicyl., 1–2; zinci oxidi et amyli, āā 25; vaselini, 50). The paste adheres to the face without any bandage; it is also dusted with starch. In the *Traumaticin* treatment, traumaticin (a solution of 1 part of gutta-percha in 10 to 15 parts of chloroform) is used as a medium for applying different remedies, such as chrysarobin, etc. It forms a pliant coating, and surpasses collodion by far in this respect.

Glycero-Gelatin is prepared in three forms: soft (5 per cent gelatin added), hard (10 per cent gelatin and water), and hard (10 per cent gelatin without water). Before using, the preparation is liquefied by heat, and in this condition is spread on to the part affected, by means of a brush, and covered with mull.

In the preparation of ointment and plaster mulls, Unna's recommendation is followed to substitute lard by mutton fat, which renders unnecessary addition of paraffin or wax. The dressings are dipped into the melted mass, dried, and rolled up. The gutta-percha mull is considered to present many advantages.

A new kind of dermatological plaster has been introduced, the basis of which consists of purified india-rubber and anhydrous lanolin worked up together to a remarkably adhesive mass. The mixture is medicated with various substances and spread upon linen, and is then known as *Collemplastrum.* Among the advantages claimed for this kind of plaster are its low cost; that the mass does not separate from the linen; that, while possessing the adhesive properties of india-rubber plaster and lanolin, it favors the absorption of the added medicament; and that the plaster can be readily removed without leaving portions adherent to the skin. Besides the simple Collemplastrum adhæsivum, others are used, containing respectively 10 to 20 per cent salicylic acid, 30 per cent pyrogallic acid, 60 per cent mercury, 60 per cent mercury and 5 per cent carbolic acid, 50 per cent thiol, 40 per cent zinc oxide, 10 per cent liquid pitch, etc., etc.—After *Pharm. Journ.*, May 23d.

Preservation of Syrups.

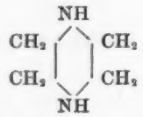
THE following method is recommended by a lady pharmacist (Miss Popelin) in the *Bull de la Soc. roy. de Pharm. de Bruxelles* (April, 1891):

When a syrup is finished, it is transferred, *while hot*, into bottles holding 2 or 4 fluidounces or more. These bottles are completely filled, no room being left for a cork. Upon the mouth of each is then placed a disc of very thick filtering paper, the diameter of the disc being a little larger than that of the mouth of the bottle. These discs become impregnated with the liquid. When the syrup cools, it contracts somewhat, and the paper discs assume a concave shape. The aqueous portion of the syrup taken up by the discs has meanwhile evaporated, and the discs, which are encrusted with crystallized sugar, form an impermeable barrier to the external air and germs contained in it.

Piperazine.

In addition to what we have said upon this subject in previous issues, the following notes will be of interest, in view of the fact that this substance is likely to play a rôle in the treatment of gout and other diseases dependent upon an excessive formation of uric acid.

Piperazine was at one time supposed to be identical with spermine, but has been shown to be different from it. It has the composition $C_4H_{10}N_2$, and its molecule may be represented thus :



It forms shining crystalline plates, melting (when anhydrous) at 104° to 107° C., is very soluble in water and very deliquescent. The aqueous solution, which is almost tasteless, has a strong alkaline reaction, but is not caustic.

The hydrochlorate of piperazine is likewise very soluble in water, less so in alcohol. It crystallizes in silky needles.

Piperazine is remarkable on account of its behavior towards uric acid. A *cold*, aqueous solution of the base will dissolve *twelve times* as much uric acid as an equal amount of lithium carbonate is able to render soluble.

Urate of piperazine, produced by boiling the base with an excess of uric acid, is soluble in water of 17° C. seven times more readily than urate of lithium.

One part of urate of piperazine is soluble in 50 parts of water at 17° C. The solubility of urate of lithium is stated to be 1 in 368.

In its passage through the organism, piperazine is not changed at all, or at least but slightly, since it can easily be detected in the urine after doses of 1 Gm. It makes its appearance in the urine a few hours after it has been taken, but continues to be eliminated, even after only one dose, during about thirty-six hours.

To show the presence of piperazine in a solution, two tests are particularly suitable. On adding to the dilute aqueous solution of its hydrochlorate solution of potassio-bismuthic iodide [Dragendorff's reagent: solution of iodide of bismuth in hot concentrated solution of iodide of potassium, and subsequent addition of an equal volume of a cold-saturated solution of the last-named iodide], a garnet-red precipitate, consisting of microscopic needles, is produced. And on adding to a dilute solution of piperazine some solution of soda, then a drop of benzoyl chloride, and shaking, a bulky, white mass separates.

Detection of Piperazine in the Urine.—Mix about 10 C.c. of the urine with a few drops of concentrated solution of soda, and warm gently for a short time. When cold, filter from the flocculent precipitate, consisting of phosphates, etc., render the filtrate distinctly, but not excessively, acid by hydrochloric acid, and add solution of potassio-bismuthic iodide. At first there will be produced a muddy-looking, amorphous precipitate, due to the nucleo-albumin contained in normal urine. This precipitate contains no piperazine. Now warm a short time to about 40° to 50° C., which causes the above precipitate to cake together; cool quickly and filter. On now rubbing the test tube briskly with a glass rod, the bismuth compound with piperazine begins to crystallize and to deposit as a red powder.

This bismuth compound thus separated from a dilute solution may easily and certainly be recognized under the microscope. It consists of characteristic star-shaped groups of crystals.

When the amount of piperazine is very small, the process of testing for it may be modified as follows:

Render the urine decidedly acid and evaporate it. Triturate the sticky, brown residue with powdered caustic soda. This causes evolution of ammonia, owing to decomposition of urea. Mix the magma with about an equal weight of sand, and disilt from a small flask at a brisk rate until no more aqueous vapor passes over into the receiver. This causes the decomposition of sarcosin, creatin, and xanthin. Piperazine, on the other hand, passes over, without decomposition, into the distillate. The latter, which has a strong odor of alkylamines, is boiled for a few minutes in order to expel most of the ammonia. The liquid is then filtered, acidulated with hydrochloric acid, and tested with solution of potassio-bismuthic iodide.

Another, though less striking method, is as follows :

Separate the phosphates, etc., as in the first-mentioned process. Then add a drop of benzoyl chloride and shake briskly. Allow to stand half a day, transfer the dirty-white precipitate to a filter, and wash it with cold absolute alcohol. This leaves undissolved the compound of nucleo-albumin with benzoyl chloride which is formed in every urine. Evaporate the filtered alcoholic extract to a small volume, transfer a drop of the residue upon an object glass, and allow it to dry. It will then show the characteristic crystals of benzoyl-piperazine, viz., transparent, rhombic laminæ of great regularity, which are often joined together in parallel position, but are never in twin crystals.—After a circular on "*Piperazine*" of Chem. Fab. auf Aktien (vorm. E. Schering), Berlin.

Phenocoll Hydrochlorate.

Another addition to the group of antipyretic and antirheumatic compounds forms the subject of a lengthy report by Dr. Hertel (*Deut. med. Wochensch.*, April 9th, p. 521). The compound is represented as being the hydrochloric acid salt of amidoacet-p-phenetidine, a base produced by the condensation of glycocoll, or amidoacetic acid, with phenetidine, under the elimination of water :

$$\underset{\text{glycocoll}}{CH_2\begin{cases}NH_2\\COOH\end{cases}} + \underset{\text{phenetidine}}{C_6H_4\begin{cases}OC_2H_5\\NH_2\end{cases}} =$$

$$= \underset{\text{phenocoll}}{C_6H_4\begin{cases}OC_2H_5\\NH.OC.CH_2.NH_2\end{cases}}^{(1)}_{(4)} + \underset{\text{water}}{H_2O}$$

Phenocoll is accordingly represented as a phenacetin, into the acetyl radical of which an amide group has been introduced.

The free base is said to be fairly stable towards caustic alkalies and alkaline carbonates, being split up only after boiling with them a considerable time into phenetidine and glycocoll.

It is also stable towards dilute acids; but after long boiling with concentrated hydrochloric acid it is partially hydrolyzed, phenetidine hydrochloride and glycocoll being formed. Phenocoll is precipitated from a solution of the hydrochloride by ammonia, caustic potash, or an alkaline carbonate, in white felted crystals containing one molecule of water of crystallization, the crystals melting at 95° C., or, when rendered anhydrous, at 100.5°. The pure base is fairly soluble in alcohol, but only slightly so in ether, benzol, and chloroform. In hot water it is very freely soluble, but with difficulty in cold, and for this reason the use is recommended of the hydrochloride, which is sent out as a white micro-crystalline powder, forming a neutral solution in 16 parts of water at 17° C. From hot water phenocoll hydrochloride crystallizes out in cubes, and from hot alcohol in needles. Professor Kobert has reported that in some preliminary experiments on animals he found phenocoll to be non-poisonous, and that its administration did not involve injurious changes in the blood, as in the case of other antipyretics. Professor v. Mering, who administered the hydrochloride in typhus and pneumonia, states that a dose of 1 Gm. reduced the temperature about 2 , or about equal to 1.5 to 2 Gm. of antipyrin or 0.8 to 1 Gm. of phenacetin, no collapse or cyanosis being observed.

Dr. Hertel himself found that simple doses of 0.5 Gm. quickly lowered the temperature about 0.5°, but only for a short time; single doses of 1 Gm. produced sometimes within an hour a fall of 1° to 1.5°, lasting about two hours. With 5 Gm. distributed over the day the fever temperature could be almost entirely controlled.

After the administration of about 5 Gm. of phenocoll the urine becomes colored brown-red to brown-black; but the elimination appears to occur rather quickly, no reaction being produced in the urine by ferric chloride solution after about twelve hours.—After *Pharm. Jour.*

American Druggist

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The AMERICAN DRUGGIST *is issued on the 1st and 15th of each month. Changes of advertisements should be received before the 5th and 20th. New advertisements can occasionally be inserted after the 10th and 25th.*

INFORMATION WANTED.

OUR *readers will confer a favor by answering any of the following questions and referring to them by number. We will undertake to forward the answers to inquiries when the request for information is accompanied with a directed envelope and postage. The names of the respondents (unless otherwise indicated) will be published in the next issue of the journal.*

ANSWERS.

THE three following are from the same source:

No. 2,519.—**Ely's Cream Balm.** Thymæ, 1 part; oil wintergreen, 2 parts; bismuth subnitrate, 65 parts; white saxolin, 2,132 parts. I find this to work well.

No. 2,520.—**King's New Discovery.** Sulph. morphia, 8 grains; fluid ext. ipecac, ½ drachm; chloroform, 60 drops; tincture white pine, 2 ounces; water, 7 ounces; carb. magnesia, ½ ounce; sugar, 14 ounces.

Rub the magnesia with 1 ounce of the sugar in a mortar, and triturate with the tincture of white pine and the fluid extract of ipecac; gradually add the water and triturate with the mixture in the mortar. Filter, and dissolve the sulphate of morphia in the filtrate; mix the chloroform with the rest of the sugar in a bottle, and add the liquid above.

No. 2,523.—**Ayer's Cherry Pectoral.** Dick's Encyclopædia, third edition, gives the formula of Ayer's Cherry Pectoral as follows: Take of syrup of wild cherry, 6 drachms; syrup of squills, 3 drachms; tincture of bloodroot, 2 drachms; sweet spirits nitre, 2 drachms; wine of antimony, 3 drachms; tincture of ipecac, 3 drachms [not wine, as he says, for if wine is used it precipitates]; simple syrup, 1½ ounces; acetate of morphia, 2 grains. Mix and add oil of bitter almonds [better to use essence], 2 drops of oil [10 drops of essence]. I have found this to be identical. Yours truly,

FRANK FRISBY.

BISMARK, S. D.

WANTED.

No. 2,525.—**Formula for "Zonweis."**

No. 2,526.—**Cause of Bottles Breaking.** Why is it that all my shelf-bottles containing waters crack about the neck?

No. 2,527.—**Arsenic Ore for Sale.** A correspondent in Calaveras County, California, writes: I would like to know if there is a market for ore containing from 5 to 6 per cent of arsenic.

CORRESPONDENCE AND NEWS.

ENGLAND.

THE fiftieth anniversary of the foundation of the Pharmaceutical Society has just taken place with much ceremony and enthusiasm. A conversazione was held on the evening of May 26th, at the house of the Society in Bloomsbury Square. The principal event was the reception of congratulatory addresses, followed by the presentation of the Hanbury medal. The following societies, associations, and colleges sent addresses, many of which were really works of art: Royal College of Physicians, the Royal Society, the Chemical Society, the American Pharmaceutical Association, the Pathological, Clinical, and Obstetrical Societies, the Institute of Chemistry, British Pharmaceutical Conference, Philadelphia and New York Colleges of Pharmacy, and the pharmaceutical associations of Illinois, Massachusetts, Baltimore, and the society at New Brunswick. Amongst foreign societies addresses were read by M. Petit from the Société de Pharmacie de France; by M. Gys from Union Pharmaceutique de Flandre; by Apotheker M. Froelich for the Deutsche Apotheker-Verein; by Dr. Thoms from the Pharmaceutische Gesellschaft of Berlin. Other addresses were presented from Prague, Denmark, Amsterdam, St. Petersburg, Sweden, Queensland, New South Wales, Victoria, etc. Letters and telegrams were read from Professors Flückiger, Dragendorff, J. U. Lloyd, J. M. Maisch, Prescott, Schmidt, Pasteur, and other distinguished scientists.

Amongst the company present were Sir Frederick Abel, Chemist to the War Office; Sir Dyce Duckworth, Professors Armstrong, Bentley, Attfield, Dunstan, Odling, and many others.

A characteristic letter was read from Mr. George Seabury, from New York, in which he expressed his deep regret at being prevented by business engagements from being present, and who thought he ought to be fined $100, so he enclosed cheque for that amount, to be devoted to the benevolent fund of the Society. Needless to say the reading of this letter caused immense cheering and laughter.

The American Pharmaceutical Association address was signed by J. P. Remington, Karl Simmon, W. H. Cotton, and C. A. Heinitsh; that of the New York College of Pharmacy by Dr. Rice, whilst that from Philadelphia bore Chas. Bullock's autograph.

The reading of the addresses, which in most cases was performed by the presidents of the respective societies, occupied nearly two hours. The Hanbury gold medal was then presented to Dr. O. Hesse in commemoration of his pharmacological investigations upon the alkaloids of cinchona, coca, etc. Dr. Hesse, in reply, speaking in German, expressed his warm appreciation of the honor, and communicated the results of his most recent investigations upon the bases of coca. In this he appears to abandon the former claims that hygrine, the hypothetical volatile alkaloid, was always present, and is inclined to believe that it is an impurity.

The Jubilee Dinner took place on Wednesday evening at the Criterion Restaurant. The toast list was very lengthy, and the president of the Pharmaceutical Society, Mr. M. Carteighe, set an excellent example by making his speeches as short as possible. Mr. Edward Horner, of the firm of Horner & Sons, wholesale chemists, replied for "The Founders of the Society"; Professor Michael Foster, M.D., F.R.S., for "The Learned Societies"; whilst Sir Lyon Playfair proposed "The Pharmaceutical Society and the health of its President." "The Guests from Abroad" was replied to by representatives of Belgium, France, and Germany, whilst Sir Joseph

Lister and Professor Tilden responded for "The Visitors."

IOWA.

THE Pharmaceutical Association of Iowa will convene at Spirit Lake, Iowa, during the 21st, 22d, and 23d of July next. This is the most beautiful of all Northern summer resorts, and the largest meeting in the history of the Association is expected. Pleasure and profit are furnished to all who attend. Fishing, boating, tennis, and other sports, new and old acquaintances, are among the attractions, and much will be done to promote the interests of pharmacists. Pharmacists of other States, representatives of pharmaceutical journals and colleges, and exhibitors, have expressed their intention to be present at the meeting by the "Lake George of the West." For space for exhibits, address Rosa Upson, M.D., secretary, Marshalltown, Iowa. Information respecting reduced rates may be had from the secretary, or the president, Mr. W. H. Torbert, of Dubuque.

ST. LOUIS.

H. E. HOELKE, at 2001 Park avenue, is one of the most scientific and best-educated retail druggists in the city.

Life membership in the St. Louis College of Pharmacy now costs $50, and quite a number are on the list. The annual dues are $2 per year, and the initiation fee an even $5.

EDMOND P. WALSH was for fifteen years secretary of the St. Louis College of Pharmacy. After a rest of a few years he re-enters the work as vice-president.

The College of Pharmacy has about decided to purchase a 50-foot lot on the southeast corner of 16th street and Lucas avenue and erect a new house for the next session.

SOLOMON BOEHM, of Eighth and Morgan streets, glories in the honor of another son.

The cut-rate war goes merrily on, and no one enjoys it as much as the cutters. St. Louis has five very stubborn ones. But the association members are also satisfied.

G. H. CHAS. KLIE and DR. H. M. WHELPLEY took a river trip to New Orleans for the American Pharmaceutical Association meeting. They had a grand time.

This is a busy month for F. W. SENNEWALD, secretary of the Board of Pharmacy, as the Board meets at Jefferson City, where there is always a good attendance.

No amendments to the pharmacy laws this year, unless the Governor will make the bill a feature of his call for a special session.

C. E. CORCORAN, of Kansas City, is as ever active in pharmaceutical affairs of local, State, and national importance.

HUGO FRIELINGSDORF is quite unwell, for the rheumatism has no mercy on him.

M. W. ALEXANDER has recovered from influenza, or something just as unwelcome, and still he smiles as his fine business flourishes.

The store on Easton avenue managed by Albert Klute was disinfected by a 500-dollar fire. Insurance not settled.

The small-pox scare is now over and City Hospital patients can receive visitors.

The spring courses of instruction in the various medical colleges all closed about June 1st.

E. PATTEN, of Carbondale, Ill., has numerous friends in this city, whom he visited recently.

Five druggists refuse to join the St. Louis Apothecaries' Association and restore full prices.

EMIL KUENSTER is the father of a very young son.

MR. SAENGER, the popular druggist at 14th and Olive streets, is no longer a handsome bachelor, but is a popular married man; he was married a few weeks ago, and is now enjoying congratulations from his numerous friends.

The Curtman prize in chemistry at the Missouri Medical College was captured by HENRY L. GOODMAN, who is a junior student. Besides being a very bright young man, he is a graduate of the St. Louis College of Pharmacy and has that advantage over the average medical student.

DR. A. V. L. BROKAW has purchased the fine residence on the northeast corner of Washington avenue and 32d street, and now occupies it as residence and office. He is one of the most prominent young surgeons in the West.

DR. J. C. FALK has fulfilled his appointment to the City Hospital and is now in general practice, with an office at 1006 Olive street.

Dr. Falk closed his lectures at the St. Louis Medical College on June 1st. His subject was materia medica, and he said that the medical boys learned more about it than is usually taught in such institutions.

One of the brightest and most attentive students at the College of Pharmacy this year was MISS A. A. BOCK, of Smithton, Ill. The two other lady members of the class were also good students.

There are many inquiries about the coming revision of the United States Pharmacopœia, and all seem anxious to see it out.

JOHN S. MOFFITT, of the Mofflitt-West Drug Company, knows how to talk in public, and he made a nice little speech at the druggists' meeting a few days ago. John is a good man wherever you find him.

AMBROSE MUELLER has returned from a vacation spent in Kansas.

JOHN BOGY is looking for a situation.

DR. P. H. FRANKLIN, of Marshall, was in the city last month. He is a member of the Missouri State Board of Pharmacy.

F. P. KERR, of Van Buren, Ark., is visiting his old home at Marshall, Mo. He is a member of the Arkansas State Board of Pharmacy.

The St. Louis College of Pharmacy and its Alumni Association are making a complete list of all the living graduates, with their addresses. Our readers are invited to supply as many as they can of the addresses for the following and report them to the secretary, Dr. J. C. FALK, 1006 Olive street:

Barker, John T.	Schmidt, Wm. G.
Brumley, Charles H.	Evans, John.
Christman, Wm.	Hill, Lafayette, Jr.
Colby, James F.	Kilbourne, Lewis P.
Fletow, Philip.	Lancey, William H.
Klein, George J.	Roberts, Thomas P.
Linthicum, P. C.	Tate, Charles C.
Niemann, Bernard.	Volz, Frederick.

NEW ENGLAND.

THE tenth annual meeting of the Massachusetts Pharmaceutical Association will be held June 23d, 24th, and 25th, at the Atlantic House, Nantasket Beach, a famous summer resort, situated about 10 or 15 miles from Boston, on what is called "the South Shore" of Massachusetts Bay. It is a nice location, overlooking the sea, and all things point now to a large meeting. It is hoped the Weather Bureau may be enabled to guarantee pleasant and warm weather, for much of the pleasure of the social features will depend on this.

The first session will begin at 3 P.M., the 23d; second session 9:30 A.M., third 3 P.M. of the 24th; and the fourth and fifth at 9:30 A.M. and 2:30 P.M., respectively, of the 25th. Trade and co-operative movements will be given prominent attention. The outlook now is that there will be a dearth of papers presented, and that the exhibit will not equal most of those in the past. The meetings will be held in the parlors of the hotel.

The only entertainment, so far as announced, is the banquet on the morning of the 24th, to be followed by a hop tendered by the wholesale trade of Boston. Baldwin's Cadet Band furnishes the music for this occasion.

Mr. J. W. Colcord, who has held the position of secretary of the Association since its organization nine years ago, tendered his resignation to the Board of Directors May 25th, owing to inability to attend any of the preliminary meetings, being compelled to be absent from home all the time. His resignation was accepted, and the local

secretary, Mr. M. L. H. Leavitt, of Boston, was appointed secretary *pro tem*. All communications regarding the coming meeting should be addressed to him.

The Board of Pharmacy was successful in securing the passage of its bill granting it an allowance of $500 annually for the purpose of securing evidence of infractions of the pharmacy law. It is likely that several test cases will soon be made of parties who are conducting pharmacies in violation of the law, as not being registered themselves or employing registered clerks. It would seem to be good policy for drug stores that have not at least *one* registered clerk, in addition to a registered manager, to do so, as otherwise there is likely to be trouble. It is understood that the Board now means to do something towards enforcing the law in this respect, which so far appears to be a dead letter. The Board has held two or three meetings lately, at which about 25 per cent were successful.

The commencement exercises of the Massachusetts College of Pharmacy were held in Association Hall, cor. Boylston and Berkeley streets, Boston, May 27th. There were about two hundred friends of the students present. The salutatory was delivered by Mr. Pierce, the valedictory by F. W. Day, and the address by E. C. Marshall. Prof. Tucker delivered the valedictory on behalf of the faculty. President S. A. D. Sheppard conferred the degree of Ph.G. upon the twenty-seven graduates. Baldwin's Band furnished the music for the occasion.

The Alumni Supper, complimentary to the graduating class, was held at Young's Hotel, Thursday evening, May 28th. Mr. M. J. Wiltse presided. After the excellent *menu* had been given careful consideration, Mr. Wiltse called upon Mr. S. A. D. Sheppard, president of the College, to speak for *Alma Mater*, which he did in his usual happy manner. Prof. G. F. H. Markoe, as he has done for the past twenty years, spoke for the faculty. Were this otherwise, it would be the play of Hamlet with no Hamlet. Mr. M. L. H. Leavitt spoke for "The Ladies"—a subject that he is at home upon. Mr. Pierce spoke for the class of "'91." Rev. Dr. Rexford was called upon and made a very pleasing address. Prof. E. L. Patch spoke for the American Pharmaceutical Association.

The Pharmacy Club have not made much of a showing of late, but a month or two ago they braced up again at a meeting at Young's which reminded of old times.

At a meeting and dinner at Young's, held May 7th, the following officers were elected by the Club: president, T. H. Hearn; secretary, C. E. George. The Club took an outing at Swampscott June 5th, spending the day fishing and sailing on the schooner "*D.*"

It is said there was "dispensing," some dispensing with dinner, and some dispensed with the breakfast they compounded before embarking. As a rule, pharmacists are not avaricious, but it is said that some of them "wanted the earth" *that* day. Who caught the biggest fish it is hard to find out accurately, as they never tell "Lize." A large quantity of clams were caught.

Considerable anxiety is felt in New England to learn the result of the consideration of trade matters by the A. P. A. at New Orleans. They begin to think that little during this generation will ever be effected in the way of stopping cutting, and it does begin to look like it. With failure after failure staring them in the face, is it to be wondered at that many of the stanchest believers in protective measures should have their patience exhausted and find faith forsaking them?

There is some occasional kicking among the retail trade at the failure of the Hood plan, but the most of them realize that he made an honest and faithful endeavor to suppress the evil, and could not be blamed for abandoning it when it became patent to every observing pharmacist that the effort was useless and was occasioning needless expense and labor upon the manufacturer.

The Lynn druggists have maintained a firm front in the way of local protection for themselves for the past twelve years or so. Lately two or three small outsiders have begun cutting to a small extent. Some of the neighboring druggists began to get restive under this competition and threatened to begin cutting themselves. A meeting of the association was recently held to take the matter under consideration, and it was voted by a large majority to continue full prices as in the past, for the present at least.

Much indignation is felt at the unwarranted attack upon one of the most conscientious and liberal-minded gentlemen of all Boston's jobbing druggists, who is at present a member of the State Senate, by another jobber, for his action in recommending, or rather voting for, certain reforms presented to the committee of which he is a member by the Board of Pharmacy. In the eyes of his many friends—and he has a host of them, both in and out of the profession, for his stanch and unyielding honesty of purpose—this attack will do him no injury, but in the very nature of the case should make him more friends. It seems, however, particularly unfortunate that every time the Board presents its needs (and no fair-minded man will deny that there are needs that should have prompt consideration, for the sake of strict justice to all, if for no other reason) it should meet with so much and apparently so well organized opposition. It cannot fail to impress itself upon the minds of all who can recall events of six or eight years ago as being the same management who worked so long and so arduously to defeat the passage of the bill at that and at previous times.

The bill introduced by the Massachusetts State Alliance to allow druggists to sell cigars and about anything else on the Sabbath was rudely sat down upon by the Legislature.

The Massachusetts State Pharmaceutical Association is making good progress through its various committees in attending to the needs of its next annual meeting, to be held at Nantasket Beach the 23d of June. It promises to be a fine affair in all its surroundings. Every effort is being made to have it one of the best attended and pleasantest meetings ever held. A ball will be given the attending members and their ladies by the wholesale trade. A seashore meeting will be a novelty in the history of the Association.

The College of Pharmacy has completed its winter's work, and about thirty-five young men are consequently happy. The graduating exercises will be held about the first of June, on some day not yet assigned.

The Barnaby mystery has been the all-absorbing theme of late, naturally on account of the mixture mailed and that a physician or two is mixed up in it. There seems to be a feeling that it cannot be laid at the door of a physician, for how much easier and safer it would have been to put it on to the back of some druggist on the plea of an error!

EMORY, DAGGETT & CO., Lynn, have sold out to a gentleman from Boston named Forrestall. F. S. MERRITT is soon to open a new store in that city, as is also a new one to be opened by HOLBROOK & CO. It seems to the casual observer that business there was being run into the ground.

J. M. NELSON, who was burned out in the great fire, is just ready to move into his new store in the newly-erected block on the old site.

Rumor has it that there is to be a new store opened ere long in Bangor, Me. Rather a dry time to open drug stores in that State since the passage of the new law last winter. It may mean an increased trade in nurse bottles or similar devices as thirst slayers.

MR. F. R. HADLEY, of New Bedford, has sold his store to a syndicate in which it is understood there are several local physicians interested. It will be styled the "Wright Drug Company," and will be in charge of Mr. E. E. Wright, of that city, who has recently sold his store to Messrs. Sullivan & Co. DR. J. P. BAILEY has recently opened a new store of small dimensions there. MR. A. H. COVELL is fitting up a new store and will soon remove to his new location on Purchase street, corner of Linden.

SECRETARY BUTLER has recently moved into his new store in Lowell, and it is a handsome store in all its appointments. May the best success attend him is the best wish of many score of friends.

By a fire over their store during the night of May 1st, MESSRS. G. C. GOODWIN & CO., the well-known proprietary dealers on Hanover street, Boston, met with a severe loss,

by water and smoke largely, although they occupied several of the rooms on the second floor which were burned. It will not materially delay their business. They were well insured.

POLLARD & WATSON, of Haverhill, have dissolved partnership owing to the continued ill-health of the latter member. The business will be continued by Mr. Pollard.

The Low Art Tile soda fountain manufacturers, owing to increased business, felt obliged the first of the month to move into larger quarters on the same street. Their artistic work seems to fill a long-felt need for something a little different in the way of ornamentation.

The Boston druggists are proposing to make it warm for the jobbing trade as retailers.

MR. JAS. O'HARE, of Providence, is making extensive alterations in his store. When completed, it will present a very neat appearance.

W. E. CATES, secretary of the Rhode Island Pharmaceutical Association, has just returned from his trip to New Orleans and reports an excellent meeting and a very pleasant trip.

MR. F. A. JACKSON, of Woonsocket, has been laid up by a severe attack of rheumatism, but is out and about once more.

MR. F. S. CLARK, of Attleboro, Mass., is laid up again with severe illness, and will be unable to attend to business for several weeks.

MR. W. B. BLANDING, the well-known jobber, we are pleased to learn, is home again, and recently paid a visit to the store, but is unable to transact any business. He is still unable to get about without assistance.

MICHIGAN.

THE new Michigan Salt Company has elected Thomas Cranage, president; C. A. Rust, treasurer; F. C. Stone, vice-president; and D. G. Holland, secretary. Mr. Holland was also secretary of the old Michigan Salt Association, and has had a great deal of practical experience which qualifies him for the position. A committee from the old association, and one from the new company, have been appointed to adjust the price at which the property of the old combine shall be turned over to the new one.

At the annual meeting of the State Board of Health Dr. John Avery, of Greenville, was elected president for the ensuing year. Secretary Baker says he has found out the cause of the unusual prevalence of the influenza during the last few months. According to him, the northerly winds and the excessive amount of ozone in the atmosphere form a combination which delights the heart of the schizomycetes and allows him to get in his work unmolested.

W. F. HENES, the well-known druggist of Bay City, was found dead in his bed on the evening of April 18th. He had gone to his room over the store to take a nap after dinner, and not coming down again, a clerk went up to wake him and found him dead. Heart failure was the cause. Deceased formerly lived in Chicago, where he was vice-president of the Chicago Drug and Chemical Co. His life was insured for $12,000 and he leaves a wife and five children.

MR. E. W. RUSSELL, brother of Superintendent Russell, of Parke, Davis & Co.'s laboratory, was discovered in a dying condition on the floor in his office at the laboratory last week. Medical aid was summoned, but he was already past all help and died before the ambulance arrived. Although he had been in Detroit but a comparatively short time, Mr. Russell had made scores of friends, all of whom extend their sympathy to his bereaved family. Heart failure was the cause of his death.

MR. WILLIAM STEARNS, manager of the Private Formula Department of F. Stearns & Co., was married last month to Miss Yates, of Port Huron. The couple went on a tour through the Southern States. Although Mr. Stearns is quite young to hold the responsible position he does, he has remarkable business ability, and it is owing to his efforts that the department of which he has charge has reached its present enormous proportions. He is the younger of Frederick Stearns' two sons, his brother, F. K. Stearns, being president of the company. His numerous friends, both in and out of the profession, wish him good luck and the best of happiness.

NEBRASKA.

AT the examination held by the Nebraska State Board of Pharmacy in the parlors of the Paddock Hotel, Beatrice, May 26th, the following members of the Board were present, viz., J. E. Riggs, Lincoln; Max Becht, Omaha; W. D. Haller, Blair; Henry D. Boyden, Grand Island; and James Reed, Nebraska City.

The following named persons were successful in passing the examination out of a class of 25: B. F. Brendel, Murray; W. W. Brown, Tekamah; D. S. Beynon, Burwell; William Bülow, Wakefield; O. W. Bullard, Beaver City; William D. Cole, West Union; M. P. Dawson, Edgar; E. Fosselman, Filley; W. H. Keeney, Campbell; Isaiah Lukens, Herman; T. W. V. P. Mercereau, Dunning; O. W. Newell, Hebron; E. E. Reynolds, Rock Bluffs; John G. Rodmell, Lincoln; Harry D. Rugg, Harvard; J. H. Remsberg, Red Cloud; Edward Tanner, Battle Creek; Dan J. Thompson, West Point; John M. Wilson, Harrisburg.

The next examination by this Board will take place as follows, viz.: Capital Building, Lincoln, August 11th, 1891; Parlors, Hotel Dellone, Omaha, August 12th, 1891; Parlors, Midway Hotel, Kearney, August 13th, 1891, at 9 A.M. sharp, each day.

Yours very truly,
HENRY D. BOYDEN, *Secretary.*

GRAND ISLAND, NEBRASKA, June 1st, 1891.

Buffalo (N. Y.) College of Pharmacy.—The honor roll of the Senior Class, at the late Commencement, was as follows, in the order of merit:

F. W. Meyer, of Cleveland, Ohio; John Welzmiller, of Bath, N. Y.; Udell S. Bramen, of Cory, Pa.; Jess. E. Hische, of Canal Winchester, Ohio; Emory H. Brecken, of Clarence, N. Y.

Mr. Willard H. Reed, of the Junior Class, received the Faculty Junior prize of $25 for the highest general average. Mr. John Welzmiller secured the Peabody prize of $50, and Mr. U. S. Bramen the Job J. Matthews prize of $25, for high class standing.

The Pennsylvania Pharmaceutical Association meets at Bedford, Pa., at 10 A. M. on the 23d inst., in the Bedford Springs Hotel. The meeting will continue through three days, holding one or two short sessions each day, the rest of the time to outdoor amusements, for which the place is particularly well adapted. The hotel charges will be $2.50 per diem. The secretary, Mr. J. A. Miller, of Harrisburg, supplies orders for tickets at excursion rates. Exhibitors of goods should address Mr. C. C. Read, of Huntingdon, who is chairman of the Exhibit Committee.

The Alumni Association of the Chicago College of Pharmacy held its annual election of officers for the ensuing year on Tuesday evening, March 10th, immediately following the supper of their reception and banquet, at Germania Hall, which was largely attended by the younger graduates, as well as many of the older ones, and their friends. The ball was a most enjoyable affair, and was participated in by mostly all in attendance. The banquet was held at the hour of 12, and was a good criterion of Mr. Stein's skill as a caterer. The toasts were well rendered by the various speakers, keeping all present in a joyful mood. The music was provided by a mandolin orchestra during the banquet and between the dance numbers. The following are the officers elected: Otto J. Hartwig, president; Fred. A. Rometch, first vice-president; Chas. C. Thiel, second vice-president; E. K. McPherson, secretary; Jos. T. Delfosse, treasurer; Executive Board for one year, Emil A. Zahn, Lewis Ellsworth, Jos. M. Stang; for six months, A. Emil Hiss, Adolph Karpen, and C. H. Rimmele. FRED. A. ROMETCH,
Sec'y pro tem.